Amendments to the Claims

Please cancel Claims 1, 3-8, 12, 15, 31 and 32 without prejudice. Applicants reserve the right to prosecute such claims or the subject matter thereof in further applications. Please add new claims 40-47. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

- 1-8. (Canceled)
- (Previously presented) An isolated nucleic acid sequence comprising a polymorphic GCG
 repeat of exon I of a human PAB II gene, wherein said polymorphic GCG repeat has the
 sequence

ATG (GCG)6+n GCA,

with n being selected from 1 to 7 and wherein said polymorphic repeat of said GCG repeat in a patient's human PAB II gene is indicative of a disease in said human patient.

- 10. (Canceled)
- 11. (Previously presented) The nucleic acid sequence of claim 9, wherein n is selected from 2 to 7, and wherein said polymorphic repeat of said GCG repeat is associated with an increased severity of said disease.
- 12. (Canceled)
- 13. (Previously presented) A method for the diagnosis or prognosis of oculopharyngeal muscular dystrophy (OPMD), a disease associated with protein accumulation in a cell nucleus, and/or swallowing difficulty and/or ptosis in a human patient, which comprises:
 - a) obtaining a nucleic acid sample of said patient; and
 - b) determining allelic variants of a GCG repeat in exon I of the PAB II gene, said GCG repeat having the sequence

wherein n is selected from 0 to 7, and

whereby at least one of the two alleles of said GCG repeat having an n equal to 1 to 7, is indicative of OPMD.

- 14. (Original) The method of claim 13, wherein n is selected from 2 to 7, and wherein said allelic variant is associated with an increased severity of said disease.
- 15. (Canceled)
- 16. (Previously presented) The method of claim 13, wherein said first allele of said GCG repeat has an n which is equal to 1.
- 17. (Previously presented) The method of claim 16, wherein said second allele of said GCG repeat has an n selected from 2 to 7, and wherein said first allele is a modulator of the severity of the phenotype associated with said second allele.

18-36. (Canceled)

37. (Previously presented) An isolated PAB II nucleic acid sequence comprising a polymorphic GCG repeat having the sequence

ATG (GCG)6+n GCA,

wherein n is selected from the group consisting of:

- a) n=0, wherein said nucleic acid sequence is associated with a non-disease phenotype; and
- b) n is selected from 1 to 7, wherein said nucleic acid sequence is associated with a phenotype of oculopharyngeal muscular dystrophy, selected from at least one of protein accumulation in a cell nucleus, swallowing difficulty, and ptosis.
- 38. (Previously presented) The isolated nucleic acid sequence of claim 37, wherein n=0, and wherein said sequence comprises the sequence as set forth in SEQ ID NO:18.
- 39. (Previously presented) The isolated nucleic acid sequence of claim 37, wherein n=0, and wherein said sequence comprises the sequence as set forth in SEQ ID NO:1.
- 40. (New) The isolated nucleic acid sequence of claim 37, wherein n=0, and wherein said GCG repeat has the sequence set forth in SEQ ID NO:2.
- 41. (New) The isolated nucleic acid sequence of claim 37, wherein n=1, and wherein said GCG repeat has the sequence set forth in SEQ ID NO:3.
- 42. (New) The isolated nucleic acid sequence of claim 37, wherein n=2, and wherein said GCG repeat has the sequence set forth in SEQ ID NO:4.
- 43. (New) The isolated nucleic acid sequence of claim 37, wherein n=3, and wherein said GCG repeat has the sequence set forth in SEQ ID NO:5.

- 44. (New) The isolated nucleic acid sequence of claim 37, wherein n=4, and wherein said GCG repeat has the sequence set forth in SEQ ID NO:6.
- 45. (New) The isolated nucleic acid sequence of claim 37, wherein n=5, and wherein said GCG repeat has the sequence set forth in SEQ ID NO:7.
- (New) The isolated nucleic acid sequence of claim 37, wherein n=6, and wherein said GCG repeat has the sequence set forth in SEQ ID NO:8.
- 47. (New) The isolated nucleic acid sequence of claim 37, wherein n=7, and wherein said GCG repeat has the sequence set forth in SEQ ID NO:9.